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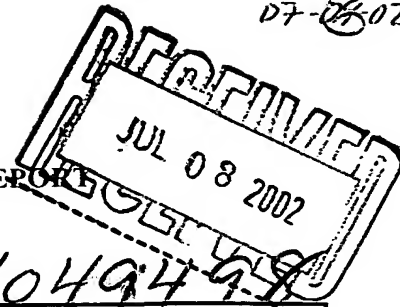
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 43 368 K	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP99/05995	International filing date (day/month/year) 16 August 1999 (16.08.99)	Priority date (day/month/year)
International Patent Classification (IPC) or national classification and IPC C23C 22/53		
Applicant WALTER HILLEBRAND GMBH & CO. GALVANOTECHNIK		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

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3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

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TC 1700

Date of submission of the demand 17 March 2000 (17.03.00)	Date of completion of this report 21 November 2000 (21.11.2000)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP99/05995

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☐ the international application as originally filed.
- ☒ the description, pages 1-4, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.
- ☒ the claims, Nos. 1-5, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. _____, filed with the letter of _____,
 Nos. _____, filed with the letter of _____.
- ☐ the drawings, sheets/fig _____, as originally filed,
 sheets/fig _____, filed with the demand,
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	4, 5	YES
	Claims	1-3	NO
Inventive step (IS)	Claims		YES
	Claims	1-5	NO
Industrial applicability (IA)	Claims	1-5	YES
	Claims		NO

2. Citations and explanations

The following documents are cited:

D1: EP-A-760 401

D2: CHEMICAL ABSTRACTS, Vol. 121, No. 6,
8 August 1994, Columbus, Ohio, US;
abstract No. 62348v.

1. The present application does not meet the requirements of PCT Article 33(2), since the subject of Claims 1 to 3 is not novel over the prior art as defined in the PCT Regulations (PCT Rules 64.1 to 64.3).

1.1 Document D1 describes a method of passivating Zn-Ni layers by treatment with a solution containing peroxide such as peroxodisulphate. The passivated surfaces are then coated with e.g. silicate layers (cf. Claim 1; Examples 7 and 16; page 2, lines 39-42; page 3, lines 51-58). The subject of Claims 1 to 3 is therefore not novel.

- 1.2 Document D2 discloses a method of passivating Zn-Ni-Cr layers by treatment with persulphate (abbreviated name for peroxodisulphate). Because Claim 1 does not exclude the presence of Cr, the subject of Claims 1 and 2 is not novel over D2.
- 1.3 It should be noted that **at least** Claim 1 is not novel over **any** of the X documents in the search report, since these documents disclose the passivation of Zn-Ni layers by means of an oxidising agent. Where the abstracts do not mention Zn-Ni layers, reference should be made to the original applications.
2. The present application does not meet the requirements of PCT Article 33(3), since the subject matter of Claims 4 and 5 does not involve an inventive step (PCT Rule 65.1 and 65.2).
- 2.1 The layers in Claims 4 and 5 are layers customarily used (cf. present application, page 3, paragraph 3) which can be applied after passivation. It is then obvious to a person skilled in the art to make use of these layers after passivation in accordance with D1 and so to arrive at a method as claimed in Claims 4 and 5. Furthermore the application does not show any effect of the combination.
3. The present invention is regarded as industrially applicable, since it can be used in the field of surface treatment.

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. Contrary to PCT Rule 5.1(a)(ii), the description does not cite documents D1 and D2 or indicate the relevant prior art disclosed therein.
2. Claim 1 has been drafted in the two-part form, however, it is not correct to place the feature "with an oxidising agent" in the characterising part, as it was disclosed in combination with the features listed in the preamble (PCT Rule 6.3(b)).

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. It is apparent from the description, page 2, paragraph 6, that the following feature is essential to the definition of the invention:

"avoiding any use of chromium".

Since independent Claim 1 does not contain this feature, it does not meet the requirement of PCT Article 6 in conjunction with PCT Rule 6.3(b), according to which each independent claim must include all the technical features which are necessary for the definition of the invention.

2. "Peroxide sulphate" in Claim 2 (and on page 3) is a typing error. "Peroxdisulphate" is intended.
3. The subject of dependent Claim 3 cannot be appended to independent Claim 1 (according to Claim 3 the conversion layer is applied to the zinc-nickel layer and not to the **passivated** zinc-nickel layer in Claim 1). This inconsistency between the claims leads to doubt as to the scope of the claims, which therefore do not exhibit the clarity specified in PCT Article 6.
4. The expression "conversion layer" used in Claims 3 and 4 is not clear, and leaves the reader uncertain as to the meaning of the technical feature concerned. The layers mentioned in the subclaims and description are **not conversion layers**. Consequently the definition of the subject matter of Claims 3

VIII. Certain observations on the international application

and 4 is not clear (PCT Article 6).

5. Claim 5 is not supported by the description as prescribed in PCT Article 6, as its scope goes beyond the scope justified by the description. The reasons are as follows: "dry lubricant layer" was omitted in the description.
6. Claim 5 does not state what the layer is applied to. Consequently the definition of the subject matter of Claim 5 is not clear.